

EMERGENCY AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post Emergency ADs on the internet at "www.faa.gov"

DATE: April 15, 2003
AD #: 2003-08-51

Send to all U.S. owners and operators of MD Helicopters, Inc. Model 369A, D, E, H, HE, HM, HS, F, and FF helicopters.

This Emergency Airworthiness Directive (EAD) is prompted by two reports of cracked tail rotor blade pitch horns (pitch horns) that failed during flight. In both occurrences, the pilot was able to land the helicopter without further incident. Investigation revealed that the cause of the failures was a fatigue crack in the pitch horns that developed before the tail rotor blade reached its retirement life. This condition, if not corrected, could result in a pitch horn separating from the tail rotor blade leading to an unbalanced condition, vibration, loss of tail rotor pitch control, and loss of directional control of the helicopter.

This unsafe condition is likely to exist or develop on other helicopters of the same type designs. Therefore, this EAD requires, before further flight, reducing the retirement life of certain tail rotor blades from 5,140, 5,200, or 10,000 hours time-in-service (TIS) to 400 hours TIS, performing a one-time visual inspection of each pitch horn for a crack or corrosion, and replacing unairworthy tail rotor blades with airworthy tail rotor blades. This EAD also requires revising the Airworthiness Limitations section of the helicopter maintenance manual to reflect the reduced retirement life, and reporting information to the FAA within 24 hours following the one-time inspection.

This rule is issued under 49 U.S.C. Section 44701 pursuant to the authority delegated to me by the Administrator, and is effective immediately upon receipt of this emergency AD.

2003-08-51 MD HELICOPTERS, INC.: Docket No 2003-SW-17-AD.

Applicability: Model 369A, D, E, H, HE, HM, HS, F, and FF helicopters, with tail rotor blades, part number (P/N) 369D21640-501, 369D21641-501, 369D21642-501, 369D21643-501, 500P3100-101, 500P3100-301, 500P3300-501, or 500P3500-701, installed, certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To prevent a pitch horn from separating from the tail rotor blade leading to an unbalanced condition, vibration, loss of tail rotor pitch control, and loss of directional control of the helicopter, accomplish the following:

(a) This AD establishes a new retirement life of 400 hours time-in-service (TIS) for the tail rotor blades listed in the Applicability section. For helicopters with an affected tail rotor blade installed that has 390 through 700 hours TIS, remove and replace the tail rotor blade with an airworthy tail rotor blade within 10 hours TIS.

(b) Before further flight, perform a one-time visual inspection of each pitch horn for a crack or corrosion in the area indicated by Note 2 in Figure 1 of this AD. Paint removal in accordance with Note 1 of Figure 1 of this AD is not required for the visual inspection.

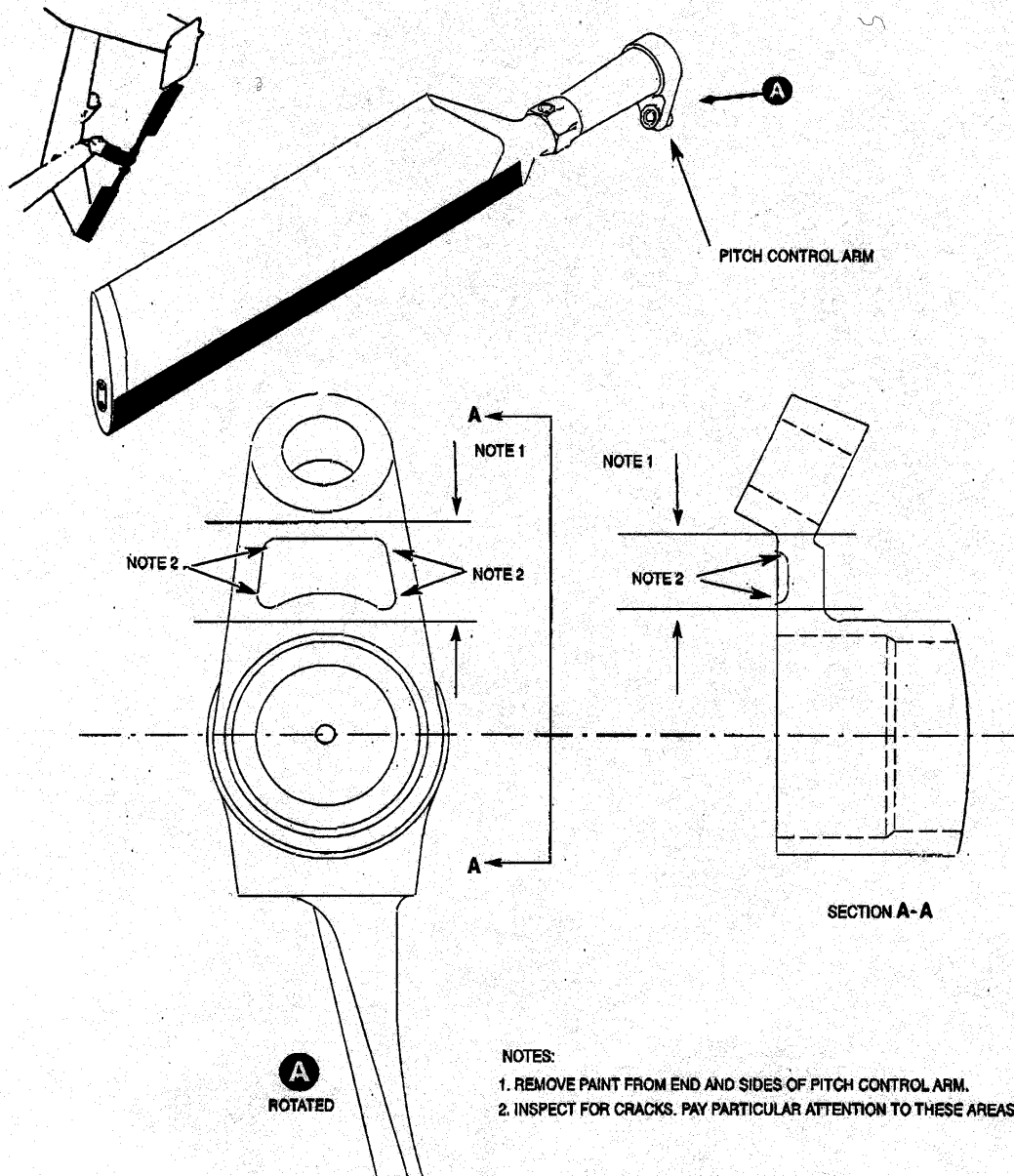


Figure 1. Tail Rotor Blade Assembly Inspection

(c) Revise the helicopter Airworthiness Limitations section of the maintenance manual by making pen-and-ink changes to indicate the new retirement life of 400 hours TIS for the tail rotor blades, P/N 369D21640-501, 369D21641-501, 369D21642-501, 369D21643-501, 500P3100-101, 500P3100-301, 500P3300-501, or 500P3500-701 of 400 hours TIS.

(d) For helicopters with a tail rotor blade installed that has more than 700 hours TIS, a one-time special flight permit to fly it to a repair facility may be issued only upon completion of an eddy current surface scan of each affected pitch horn (see Figure 1 of this AD). Paint removal in accordance with Note 1 of the Figure 1 of this AD **IS** required for the surface scan. If a crack is found, remove the tail rotor blade and replace it with an airworthy tail rotor blade before further flight.

(e) Within 24 hours after completing the requirements of this EAD, report the information requested in Appendix A for all tail rotor blades listed in the Applicability section, including the tail rotor blades that were removed as a result of this AD. Report the information to: Manager, Los Angeles Aircraft Certification Office, ATTN: Fred Guerin, 3960 Paramount Blvd., Lakewood, California 90712, telephone (562) 627-5232. Reports may also be faxed to (562) 627-5210 or emailed to fred.guerin@faa.gov.

(f) Information collection requirements contained in this AD have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.) and have been assigned OMB Control Number 2120-0056.

(g) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Contact the Los Angeles Aircraft Certification Office, Transport Airplane Directorate, FAA, for information about previously approved alternative methods of compliance.

(h) **Emergency AD 2003-08-51, issued April 15, 2003, becomes effective upon receipt.**

FOR FURTHER INFORMATION CONTACT: Fred Guerin, Aviation Safety Engineer, FAA, Los Angeles Aircraft Certification Office, Airframe Branch, 3960 Paramount Blvd., Lakewood, California 90712, telephone (562) 627-5232, fax (562) 627-5210.

Issued in Fort Worth, Texas, on April 15, 2003.

David A. Downey,
Manager, Rotorcraft Directorate,
Aircraft Certification Service.

Appendix A
Tail Rotor Blade Inspection (Sample Format)

Send within 24 hours to:
Manager, Los Angeles Aircraft Certification Office
ATTN: Fred Guerin
3960 Paramount Blvd.
Lakewood, California 90712
Fax: (562) 627-5210
Email: fred.guerin@faa.gov

Date:

Operator or Company Name:

Name of Contact Person:

Address:

Telephone:

Fax:

Aircraft Serial Number:

Aircraft Registration Number:

Estimated average flight hours per year:

T/R Blade Part Number:	Serial Number:	Total Time:
Crack found? (Yes/No):	Corrosion Found? (Yes/No)	
T/R Blade Part Number:	Serial Number:	Total Time:
Crack found? (Yes/No):	Corrosion Found? (Yes/No)	
T/R Blade Part Number:	Serial Number:	Total Time:
Crack found? (Yes/No):	Corrosion Found? (Yes/No)	
T/R Blade Part Number:	Serial Number:	Total Time:
Crack found? (Yes/No):	Corrosion Found? (Yes/No)	

Comments/Additional Information: